

Classification Race

Topic: Biology

Objectives: Classify natural objects as living or nonliving.
Classify natural objects as botanical or zoological.

Grade Level: 4 - 12

Time: 10 – 15 minutes

Vocabulary:
biology
botany
zoology
dichotomous

Materials: A collection of natural objects, some nonliving, some from plant life and some from animal life, scraps of cloth, small plastic bowls, timer or stop watch, whistle, writing pads, pens or pencils

Location: Front Lawn Grove or Saturn Playground

Background: Objects in nature can be grouped into two dichotomous classes, things that are now or once were living and things that are nonliving. Biology is the study of the living things. These living things can then be divided again into two categories: plant life and animal life. The study of plant life is called botany. The study of animal life is called zoology. In this activity you will find natural objects and classify them first as living or nonliving and then as botanical or zoological.

Advance Preparation: Give each student a scrap of cloth and a plastic bowl. Arrange the collection of natural objects on top of a scrap of cloth laid on the ground. Some possible items are leaves, acorns, rocks, feathers, soil, galls, twigs, bark, pine cones, seeds, and bones. Cover them with another cloth scrap. Go over the procedure below with the students before they actually begin the concentration game.

Procedure:

1. Choose a partner. Place your scrap of cloth down on the ground. This is your home base.
2. When your teacher or group leader lifts the scrap of cloth covering the collected objects, look closely at all the natural objects in the collection. Concentrate and try to remember what you see there. You will have only a few seconds to study the objects.
3. When your teacher says “go,” you and your partner will try to find as many of the objects in the collection as you can. Collect them in the plastic bowl. Your teacher will blow a whistle when time is up.

4. When you hear the whistle, return quickly to your home base and together with your partner arrange the objects you have found on your cloth scrap.
5. Compare the items you and your partner found with the original collection. How many did you remember? How many did you find? Which team found the most items that were in the original collection?
6. Now you will have one minute to sort the objects that you and your partner found. First sort them into the two categories of living or nonliving. Place the biological (living) objects on one side of the cloth scrap and objects that come from nonliving things on the other side.
7. Now sort the biological things again into two piles, botanical and zoological.

Questions to think about and discuss:

1. When you grouped things into the two categories of living or nonliving, you were using a dichotomous system of classification. Then you used another dichotomous system when you classified the living things as botanical or zoological. What do you suppose the word *dichotomous* means? What do you think might be some reasons for using a dichotomous system of classification?
2. Which teams were able to correctly classify all the items they found? Which of the objects were hard to classify?
3. What other sorts of things might you find in Piedmont Park? What other categories might be you use to classify them?
4. With your partner, try to devise another dichotomous system to classify the objects you found in Piedmont Park. Think of ways to includes categories for all the items you found.